The Indian Poultry Gazette.

Vol. XXI. (Price Nine Annas.) *November 1932.* *(Registered L-1322) No. 11.*

CONTENTS.

	Page.
From the Editor's Chair	195
Problems of artificial incubation	197
Practical hints on Poultry housing and equipment in India	199
Blackhead in Turkeys	203
An Appeal	204
Egg laying test	209
? ? ? ?	213

FROM THE EDITOR'S CHAIR.

How happy we are to announce that His Excellency the Viceroy has consented to preside at the Prize Distribution of the coming All-India Poultry Show, promised to give a cup for the "best bird in the show", and both their Excellencies Lady and Lord Willingdon have been pleased to promise to spend some of their precious time at the show. What responsibility it is now on us we wish to leave entirely to our readers to appreciate; there is one thing we must say and that is that it is a very great task which has somehow or other to be accomplished. But we need hardly say that we only want funds and our readers help in other ways to do this. We wonder why there is so much delay in sending contributions.

We must here acknowledge with our respectful thanks, a donation from His Excellency The Governor of Bengal whom we are very grateful to and we are grateful also to Captain Sherrard Smith for his donation. We are hoping to have additions to it very soon and to have at least Rs. 3,000, to make the show worthy of the visit of our noble patron.

It was stated by one of our correspondents in the October Gazette that Mr. Ziaul Islam is the founder of the Asil Club. This is not quite correct as we think Mrs. Fawkes was the real founder as she was the person who suggested this to us in 1927 and we with the help of Mr. Ziaul Islam made this suggestion an accomplished fact.

What we would now ask readers is that every one of them should send his or her best birds to the show. A great friend of the poultry industry in India and an important gentleman in the Club has suggested to us that we ought to find a local person in Delhi to help us in the preliminary arrangements and we think this is the only way we can do the thing satisfactorily. So, we would now request our readers to let us know who would volunteer to take on this job.

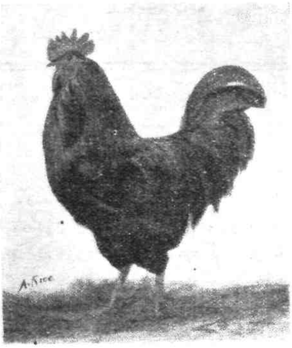
There is a very important investigation being carried on at the U. P. Veterinary Research Institute, Lucknow, under the able direction of Captain Hickey, Director, Civil Veterinary Department, on internal parasites of poultry specially worms, and we have been promised by Captain Hickey, who is always willing to help us, a very helpful article on the subject for our readers for which our thanks are due to him.

Another item of good news is that our Committee Member for Bengal Mr. Yule has written to say that eggs can easily be sold in Calcutta at Rs. 1-8-0 a dozen and he thinks a collecting centre even if established at Lucknow would make a profit. He is prepared to go into this matter thoroughly and it is this that is needed most at the moment in India and we shall, therefore, be glad to help members on hearing from them.

The Kashmir Durbar has started poultry breeding work on the same lines as is being done by the U. P. P. A. This has been suggested by the able Hon'ble Minister of Agriculture, Kashmir, Mr. V. N. Mehta, I.C.S., recently Secretary to U. P. Government, Department of Education. We are sorry to say the Jhelum and Jodhpore Farms have been closed down and we understand the Punjab Government Farm at Gurdaspore met the same fate.

We would invite readers attention to the Schedule and entry forms for the All India enclosed with this issue and hope we will have to send out hundreds more. Ask for more because we are sure you would want more this year.

The suggestion regarding appointing Mr. Ziaul Islam we think is sound and we therefore have accepted this. We would, however, suggest that Mr. Mushtaque should exhibit his Asils now as there is going to be a very keen competition next year in this class. Wa shall be glad to give the Asil standard for judging sent to us by the Asil Club members. Once more, before we go to press, we wish to request our readers to send their donations as soon as possible as all our plans for the All-India are held up on account of delay in this.



AUSTRALORPS.

Mrs. Grain has imported a further pen of this wonderful dual purpose fowl SEE THEM AT THE SHOW and judge for yourselves.

EGGS FOR HATCHING.

No. 1 pen per setting Rs. 25.—*Headed by imported cockerel of magnificent* type bred from 267 egg dams, mated to 2 imported pullets of 251 egg dams, and 6 of my last year hens specially selected for heavy egg production.

No. 2 pen per setting Rs. 15.—Headed by *imported cock, 1st Lucknow* 1930, fully acclimatised, proved sire of winners, his son was placed 1st in class Calcutta 1931, mated to 8 selected pullets sired by cockerel placed 2 in class at Calcutta January 1931.

No. 3 pen per setting Rs. 15.—Headed by cock placed 2 in class at Calcutta January 1931, mated to 8 specially selected pullets sired by imported cock now heading No. 2 pen.

WHITE LEGHORNS.

No. 1 pen per setting Rs. 15.—Headed by imported cock of 280 egg strain mated to 10 hens of *good utility type and layers of large eggs.*

No. 2 pen per setting Rs. 15.—Headed by cockerel whose dam laid 525 eggs in 24 months mated to 8 hens of good utility type and heavy layers of large eggs.

15 eggs sent with each setting in full satisfaction.

MRS. R. GRAIN.

12 **107, BUNGALOW, - - - KANCHRAPARA E. B. Ry.**

BOOKS ON GARDENING

by

Capt. W. SHERRARD-SMITH, M.C.,

Superintendent Government Gardens,

ALLAHABAD.

Practical Hints on ROSE CULTURE IN INDIA.

Fully illustrated. Every subject clearly dealt with. Foreword by The Honourable Mr. Justice C. H. B. Kendall, I.C.S.

Usual Price Rs. **3-8-0** Reduced Price for Gazette Readers only Rs. **2-8-0.**

Practical Hints on CHRYSANTHEMUM CULTURE IN INDIA.

You cannot fail to succeed with the help of this book. Illustrated. The subject is dealt with in *great detail.*

Usual Price Rs. **2-0-0.** Reduced Price for Gazette readers only Re. **1-0-0.**

Practical Hints on MAKING and MAINTENANCE OF LAWNS in INDIA.

A book that should be in the pocket of every one in possession of a Lawn. Foreword by The Honorable Mr. Justice Guy P. Boys.

Usual Price Rs. **2-0-0** Reduced Price for Gazette readers only Re. **1-0-0.**

Practical Hints on FLOWER and VEGETABLE CULTURE in INDIA.

A most instructive book. Opinion has been expressed that the Tabular Statement of information and the Vegetable Calendar alone are worth the price.

Usual Price Rs. **2-0-0** Reduced Price for Gazette readers only Re. **1-0-0.**

All four books together Reduced Price Rs. **5-0-0.**

Apply to :—**THE AUTHOR.**

PROBLEMS OF ARTIFICIAL INCUBATION.

(*Continued.*)

II. FACTORS INFLUENCING INCUBATION.

BY ALEXIS L. ROMANOFF,

Cornell University Agriculture Experiment Station Ithaca, N. Y.

During the incubation period eggs are exposed to certain environmental conditions in respect to the temperature, quality of air, and humidity. The growth and the development of an embryo while in the incubator depend entirely upon these environmental factors.

The set of conditions under which the embryo will grow the best is the ideal environment. Unfortunately, we do not know yet what are the ideal conditions. Nevertheless we get fair hatches under the set of conditions which we call the optimum conditions. *The optimum conditions of incubation, again,* may be slightly different in each type or make of incubator.

In order to conform to the fundamental laws of hatching it is worth while to know what is going to happen to the embryo and to the final hatching of the egg if any one of the environmental factors, such as temperature, purity of air, and humidity, is abnormal. Which one of these environmental factors of incubation most strongly influences, (*a*) the length of incubation period, (*b*) the growth of the embryo, (*c*) the embryonic mortality, and finally (*d*) the hatchability of the eggs ?

A. *Incubation Period.*

The growth of a new individual bird begins directly after fertilisation, which may occur a considerable time before the egg is completed and laid. After laying, the development of the embryo stops and again proceeds when the egg is heated and kept at about the bird's body temperature. Consequently, the incubation period embraces only part of the bird's embroynic development: although this is the largest portion of the process of development.

The true incubation period is the period of the development of the embryo from the time of steady application of heat to the eggs until the young are fully released from their shells. The incubation period varies with the species of animal. For example, th eggs of reptiles require from 6 weeks (ring snake) to 52 weeks (lizard). The eggs of domesticated birds require from 14 days (pigeon) to 42 days (ostrich).

In general the length of incubation period is inherited by each species. Under optimum conditions the incubation period of the domestic hen is almost exactly and invariably twenty one days, that is, the same as that of the ancestral Jungle Fowl. It is interesting to note here that the incubation periods of both birds and reptiles show a decided tendency to arrange themselves in groups of seven-day periods (*a septenate multiple*)

Incubation Periods of Birds and Reptiles.

	Birds.		Incubation Period.
(1)	Pigeon canary ...	...	14 days.
(2)	Chicken ...	...	21 ,,
(3)	Turkey, goose, duck, guinea fowl ...	...	28 ,,
(4)	Swan ...	...	35 ,,
(5)	Ostrich ...	...	42 ,,
(6)	Penguin (Emperor)	...	49 ,,
(7)	*Strazzo, Emu* ...	...	56 ,,
	Reptiles.		Incubation Period.
(1)	Ring Snake ...	...	6 weeks.
(2)	Turtle, milk snake	...	8 ,,
(3)	Crocodile ...	...	12 ,,
(4)	Lizard (Tuatara)	...	52 ,,

This septennate tendency has been explained on the hypothesis that it is inheritance from ancestors *who were aquatic and subject to, and possibly modified* maximum tides every twenty-eight days. Moreover the same septennate or monthly spacings correspond to the certain periodical functions of mammals shown by periods of gestation and rut.

In spite of the fact that the length of incubation period of birds is constant, the hatch of a hen, for instance, may be slightly shortened or considerably prolonged. An attentive, faithful sitting hen in favourable weather and with a suitable nest site may *bring out a hatching of chicks in twenty days. In the* incubator, the increase of temperature, especially toward the end of incubation, shorten the length of incubation, but only by a few hours. However, at times it is exceedingly difficult to know the dividing line between successfully shortening the period and killing the embryo.

On the other hand, by cooling the embryonic development may be retarded and the incubation period extended to twenty-three or even twenty-four *days. There are many ways by which the cooling of* eggs occurs during natural incubation, (1) a restless, inattentive hen, (2) a hen in ill-health or badly nourished, (3) a cold site for the nest, (4) a poorly constructed nest, and (5) conditions preventing the eggs from properly receiving the necessary heat, such as too thick or too thin shell, or too small eggs. In *artificial incubation the hatching may be prolonged* for several days by lowering the incubation temperature. In general, excessive chilling or over-heating promptly kills the embryo.

It frequently happens that the eggs of one setting do not hatch at the same time. This is due to the different stages of development of the embryo, at the time of egg laying, and to the differences in the size of eggs, and the quality of the egg shell and also due to an incidental cooling of some of the eggs.

B. *Growth of Embroy.*

(To be continued.)

DO NOT LOSE THIS OPPORTUNITY.

Who will win prizes at poultry exhibitions in India and make sure that he is breeding the type of bird that would fill the egg basket with right size eggs and be true to its breed standard ?

Only the Breeder who buys from us and thoroughly studies the following Coloured Plates :—

Black Leghorn Pair | **Black Minorca Hen**
Light Sussex | **Rhode Island Reds**

Wyndottes, Partridge, Buff and Blue Laced

TYPES OF UTILITY POULTRY.

We *also hope to receive copies of the "Feathered world year Book for 1932"* from England as some of our readers were anxious to get these.

Rates:—Plates at Re. **0-8-0** each; three of one breed at Rs. **1-6-0** only, available after the 25th of this month; packing and postage extra.

Hony. Editor,
INDIAN POULTRY GAZETTE,
2, Peel Road, Cantonments, Lucknow.

MISSION POULTRY FARM, ETAH, U. P.

SPECIALIZES IN :—

DUAL PURPOSE EXHIBITION AND UTILITY R. I. REDS.
EXHIBITION AND UTILITY MINORCAS.
EXHIBITION AND UTILITY WHITE LEGHORNS.

EGGS FOR HATCHING.

R. I. REDS, EX-UTILITY ... **Rs. 30/-** per Dozen.	UTILITY MINORCAS ... **Rs. 18/-** per Dozen.
R. I. REDS UTILITY ... **Rs. 18/-** per Dozen.	EXHIBITION LEGHORNS (Dewar's) ... **Rs. 24/-** per Dozen.
EXHIBITION MINORCAS (Imported Pen) ... **Rs. 30/-** per Dozen.	UTILITY LEGHORNS ... **Rs. 18/-** per Dozen.

Packing and despatch free. 15 eggs sent to the Dozen.

BREEDING STOCK FOR SALE.

Cocks, Cockerels, Hens, Pullets, Exhibition White Leghorns Rs. **15/-, 20/-** and **25/-** each.
Utility White Leghorns Rs. **10/-, 15/-** and **20/-** each.

Crate and Freight extra at cost.

SATISFACTION GUARANTEED.

1. **A. E. SLATER,** ***Manager.***

PRACTICAL HINTS ON POULTRY HOUSING AND EQUIPMENT IN INDIA.

Part 6

By

CAPT. W. SHERRARD-SMITH, M.C.

(Concluded.)

Open Runs.

"What area of open space do I require for my birds"? If I have been asked this question once I *have been asked it a hundred times.* Never have I been able to give the same answer. Sometimes the proud breeder is lucky enough to own rich soil, plentifully stocked with fruit trees, shrubs, grass land, adequately irrigated, providing the maximum amount of green food, worms, insects, shade and pleasure to the birds *all the* year round. At other times the only provision has been a barren waste, clean as a drum. A square mile of such land would be no use to any bird.

On land which provides a reasonable amount of shade overhead, a little green grass here and there throughout the year, and provides sufficient occupation for the birds, scratching for insects and digging for worms, then I would say one acre the very minimum to 40 birds. If more space can be provided so much the better so long as the birds do not get out of control and lay their eggs in hidden corners.

I can hear Mr. X say "Rot I keep 200 birds on less than that". And so he does, but what is more he advertises eggs of "so-and-so's" strain at "so much" a dozen. Let me tell you right here that though the eggs originally came from Heaven itself, they are no longer Heaven's strain when laid by birds bred under these conditions. Such eggs sold for hatching are barely worth eating and this—though whisper it gently—more than any other condition of circumstance—is responsible for the rapid deterioration which takes place with the stock bred in this country.

The next time you see such a farm and the farmer in his eagerness to sell you his stock tells you that his birds are so-and-so's strain, tell him to go to blazes. Have nothing to do with such a Farm. Flee from it as you would from a rattle-snake.

I am, of course, here referring to the breeding of stock full of health and vigour, full of stamina, and from which you can rightly expect progeny that will carry on the good work.

On intensive lines, for eggs only, 100 or 200 birds may be kept on the same ground provided you make proper methodical arrangements and you spend time and labour in managing the birds. But such stock cannot be bred from.

For chicks the same thing applies only more forcibly. To raise 40 or 50 chicks to 7 months old require an acre of suitable land the very least. Starting with 100 and culling out till there are 40 left at 7 months, one acre of land is not a bit too much. Once the chicks are hatched there must be no standing still they must be kept moving forward all the time. *No amount of food without sufficient open run will* accomplish this. The slightest check either from starvation or want of sufficient run, and all the food *and attention in the* world will not put matters right.

Of course Mr. X will tell you that he can raise 100 chicks on 100 square yards, and he does it too! And you poor reader have purchased the eggs resulting from such birds, and which Mr. X advertised as so-and-so's strain! Heaven help you—these instructions cannot.

We often talk of the cruelty of the Indian milkman who draws off all the milk from his cow, and then allows the poor starved calf to draw off what is left—rather Irish I will admit—How did you raise the dozen chicks you had last year? Under a *tapa* four feet square! Yes I thought so, and then you want me to purchase the eggs from these birds advertised as so-and-so's strain, every bird having a crooked breast-bone, knocked knees, and flabby muscle. I know there will be an up-roar at this exposure, but I have seen too much.

The "SILVER STEEL"
Chicken Toe Punch.

Price Re. 1/- postage As. -/2/- only.

The Indian Poultry Gazette,

LUCKNOW.

"Ginger" came to see my pens the other day—I proudly showed him round. "Are Mrs. so-and-so's fowls your strain? Sadly I hung my head "Yes" said I. Next day I was told "Ginger" had bought all Mrs. So-and-so's foowls—Poor "Ginger" he has "my strain" Not a sound bird among the lot—I saw them raised from day old. That *tapa* four feet square! Housed with ducks and geese on a damp floor when they were barely into their teens (weeks not years). Rabbits too shared their bed at night, by day that *tapa* four feet square! Ginger will sell you eggs from "my strain" at Rs. 4 per dozen.

Have I convinced you of the necessity for ample open runs?

Chicks and fowls will never over-eat themselves, no matter how hungry, on the best grazing ground

IMPORTED LIGHT SUSSEX.

From laying Trial Winners.

England Gold medal strains.

Sittings Rs. **20**/- per doz. Cockerel and pairs for sale.

White Leghorns (Record Layers) Sittings can be booked (from November 1st onwards) when New Importations arrive: Rs. **20**/- per doz.

White Orpingtons. Sittings available only from December onwards: Rs. **15**/- per doz.

Apply:—

M. WARD,

Sole Importer of Pedigree Sussex in Assam.

Red. GABLES,

Shillong,

ASSAM.

ENGLAND'S

LEADING POULTRY JOURNAL.

THE POULTRY WORLD

is edited by

C. G. MAY,

assisted by

WILL HOOLEY, F.Z.S.,

and a brilliant staff of contributors.

FREE ADVICE

on *all* poultry problems is *willingly* given at *all* times.

The practical outlook, the wealth of good ideas and profit-making hints will immediately impress you when you see "The Poultry World." Every page is written by experts who know poultry because their whole lives are spent in the fancy; and they give you *the full benefit of their experience liberally* and without stint.

You cannot read "The Poultry World" without finding out how to improve your stock, obtain more eggs, earn bigger profits and in general make your poultry more worth while.

THE POULTRY WORLD

2D. **WEEKLY** 2D.

4, CARMELITE ST. LONDON, E4

or

Exc. *Through the* **I. P. GAZETTE.**

KUNWAR NASIHAT ALIKHAN

ORIENTAL POULTRY FARM.

Sadabad, Dist. Muttra, U. P.

Breeders of R. I. Reds, Black Minorcas, L. Sussex, White and Cuckoo Leghorns.

Young stock from the said breeds is available at reasonably low rates. *Sittings of:*

Leghorn eggs	@ **Rs. 7/-**	per doz.
R. I. Red eggs	@ **Rs. 7/8-**	per doz.
Black Minorcas	@ **Rs. 6/-**	per doz.

12

Fifteen eggs for Black Leghorns, R. I Red, Australops, White Leghorns and Pure Basrahs (parent birds imported last year) *Rs.* **12/-**, *nine eggs Rs.* **8/-** delivered free

Black Leghorns, Whyte Wyandottes and R. I. *Reds expected from England* in November. Book your orders for eggs now.

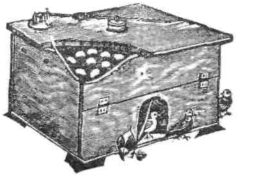
Young *stock* available at reasonable rates. Card board boxes, Silver Hen Incubators and several hundred yeards of wire netting available.

My birds won several specials and prizes at All India and several cups at Allahabad show. Quality second to none.

S. K. SHAMSHADALI.

St. Sadulla Khan.

12 **Delhi.**



The Celtic Incubator and rearer. 20 eggs size Rs. 25 30 eggs Rs. 30. 45 eggs Rs 35 Complete with best English Thermometer. Capsule and printed instructions Profitable Poultry Farming in India Booklet Re. 1. "Eggon" one packet makes twelve fowls lay continuously six months Rs 2. "Preserveg" preserves 50 eggs ans. 6. Tick Proof Perch Brackets Rs. 2-8 pair Egg testing lamps Rs. 3. Coloured celluloid rings fowl size ans. 4. Numbered rings ans. 8. Chick rings ans. 4 per dozen. Safety egg boxes ans. 12. Automatic fountains chick Rs. 1-8. Fowl size Rs. 2. Chick troughs Rs. 1-8. Best British made Incubator Capsules Rs. 5. Thermometer Rs. 5. Flint and limestone grit chick size fowl size 7 lbs. Rs. 1-4. Chick rearing meal 5 lbs. *Rs. 2. Poultry laying meal 7 lbs. Rs. 2. Poultry Remedies* D. R. Cholera and Diarrhoea cure D. R. chicken Pox cure D. R. Vim Tonic pills. D. R. roup cure "Ticklo" kills ticks, all Rs. 2 each Full detailed illustrated list free. ROSS I. P. G. Poultry Appliances.

IGATPURI G. I. P.

12.

R. I. Reds. Australorps

Wh. Leghorns. Bl. Minorcas.

Pedigreed Poultry selectively bred from imported strains of prolific layers—standard type and excellent colour.

Whole-time personal attention—trapnests ie use throughout the year.

Cockerels and Pullets (from 6 months old)—Rs. **10**/- each, Trios—Rs. **25**/-,

Crate & Freight extra.

Settings (15 Eggs)—Rs. **10**/- } inclusive
Day-old chicks—Rs. **15**/- doz. } freight etc.

G. M. BRYAN,

9 19, Cantonments,—FYZABAD, U. P.

Quality Gains Confidence.

My numerous wins at this year's

ALL INDIA.

Fresh stock imported this year. Sittings and young stock available and booked in strict rotation.

Breeds:—R. I. Reds, Minorcas, Wh. Leghorns, Wyandottes, L. Sussex and Chittagongs.

Prices per sitting of 15. N. R.

Chittagongs	Rs. **12/-**
Other Breeds	,, **20**/-

Capt. S. R. CARROLL.

Deoli.

12 **RAJPUTANA.**

and no amount of artificial feeding will make up for the feed on insects and worms which they hunt up morning and evening. Above all the making up of a Balanced Ration need cause you no anxiety, the food procurable on an open run will rectify any errors in your Balanced Ration. John Citizen who has his four pens in his back yard need not go to the expense of enclosing in open runs. He uses his whole compound as his open run. Each pen of birds is let out in turn into the compound from the enclosed pens. But of course some one must be in attendance all the time. The Chicks may be carried off by his neighbour's champion fox terrier. The Selected Breeding pen may be ruined by the serenades of the *murga* from over the wall, while your laying hens will delight in laying their eggs where the chokra boy waits for them and pinches them.

If your pocket will allow you should net in the open runs. If a run to each pen cannot be afforded, there should be at least an open run to the Breeding pen otherwise promiscuous breeding must result in chaos.

I have blown my own horn about "my" houses, "my" runs and "my" birds, but I might as well tell you right here I am not an agent for angle iron or wire netting, nor do I keep my stock from a business point of view, but I will, however, be glad to exchange a bird or two with you by way of introducing new blood provided you are a free range wallah and an honest fellow.

Fig. 5. (in the October issue of the Gazette) shows a plan of a practical breeder's lay-out. It is based on 40 birds (approximately) to the acre. Four acres are required. Two breeds are kept necessitating :—

4 Breeding pens (approx. ¼ acre each)A. B. C. D.

2 Chick pens (approx. ½ acre each) E. F.

2 Flock pens (approx. 1 acre each) G. H.

8 Single Cock pens and a Grain Store and Keeper's house.

The large and small letters denote the open runs and covered runs respectively. All sheds must face East in the Plains of India. The whole Lay-out is planned for convenience and economy. 17 Gates are necessary each with a clearance of not less than 2½ feet. 1½ inch meshing is used for the bottom of the open runs and a 2 inch meshing at the top. These fences should be 6 feet high.

With only one breed the pens G and H ar eliminated. A and D are used as Breeding pens and B and C as Chick pens. E and F as Flock pens. With this modification the Chick pens together will raise about 30 chicks each culling out to 10 birds each at 7 months old, whereas E and F as Flock pens will accommodate 20 birds each.

The Daily Routine.

In one word Change—There is nothing like change in diet and change in environment. Feed the birds on a grain feed in the covered run, in [illegible] of scratching and the birds want a change. Throw open the doors of the open runs and let them scamper out. Two hours of exercise and they will willingly return to the enclosed pen. Here they may laze it till mid-day when their mash feed will keep them occupied for an hour or so. A nod and a doze and they will be eager to be out again into the open runs. An hour before sunset and they will all scamper back for their supper, another grain feed in the sand or litter. Before the last grain has been scratched out the lazy ones will begin to toddle off to bed. The last to bed will hold first place in the egg record. At dawn they "start the day over again". One constant change.

It is far better to have 40 birds on half an acre and controlled in this manner, than to have the same number of birds on an acre over which they roam all day long, without any change.

The daily programme amounts to this :—

One hour's scratching for grain in the sand or litter at dawn (6 to 7). Two hours scratching for insects in the open runs (7 to 9). Two hours rest within the covered pen, picking grit and greens (9 to 11). Three hours at their mash hoppers and a loll about (11 to 2). Another two hours out again in the open runs (2 to 4). Finally another hour at scratching for grain in the enclosed pen (4 to 5). And then off to roost for the night. Here lies the secret of Successful Poultry Culture—change—constant change.

Useful Tips.

These notes would be incomplete if I were not to mention one or two helpful points connected with the Lay-out of the Poultry Yard. The Great War taught many of us other things than the "Ostrich trick". Most of us know what a "Double apron" barbed wire entanglement is. Those who are less fortunate need not hope for a description. Sufficient it is to say that, in the process of erection, wherever one wire crosses another they have to be fixed together, and done quickly too, more often than not, midst of a hail of bullets. The handle of the trenching-tool is placed between the two wires and then quickly twisted three times round and the handle withdrawn.

All Poultry breeders are familiar with the job of fastening two breadths of wire netting together. A pair of pliers, yards of thin strand wire, laborious cutting and tying of knots a foot apart, fingers poked, many exclamations of suppressed d..........s etc., etc. While I was thus engaged instructing six men, encouraging every exclamation of pain with words of sympathy it suddenly all came back to me, that "Double apron" and the trenching tool handle ; Curses, Clothes torn to shredes, hands, legs and faces bleeding and "Much licking of the dust" : I called for a nail, stuck it between, the selvedged edges of the netting and gave it a double twist. No German could pull it as under !

The same thing was repeated a yard apart. I was soon able to accomplish in an hour what six men took to do in a day. But what is more the job when

WATCH THE GREAT
ALL-INDIA POULTRY SHOW

To be held in Delhi

Under the Patronage of
HIS EXCELLENCY THE VICEROY,
H. E. THE GOVERNOR OF BENGAL, H. E. THE GOVERNOR OF U. P.,

on Saturday, Sunday and Monday the 28th, 29th and 30th January, 1933, respectively.

Entries close 15th January, 1933.

Judges :—Messrs. **A. E. SLATER**, **C. H. READER**, and **ZIAUL ISLAM**

ALSO

MAKE IT A POINT TO ATTEND

THE ALL-INDIA POULTRY CONFERENCE

in connection with it, if you wish to find out solutions to your poultry problems in India. Come with your views in the form of papers on the different aspects of the Industry.

I only want your exhibits in hundreds, contributions, and papers read by you personally. Help me to make it the greatest success ever known in India. If you give me what I require I assure you I shall make it so.

For particulars apply to :—

NURUL ISLAM,
Hony. Secretary.
2, Peel Road, Cantonments,
LUCKNOW, U. P.

finished was as taught as a drum. No sharp ends and no sagging netting. Try it the next time you are putting up a wire netting fence. Staple the netting to the up-right posts leaving half an inch space between the two selvedge edges. Insert a nail between the two breadths and twist, thereby knotting the two selvedge edges together. Done in two seconds. It takes no time to dismantle, the nail is inserted in the same hole and twisted in the reverse way.

The upright posts which support the wire netting of the runs are always an expensive item if some permanent material is used. Bamboo posts soon fall to pieces, and if the repair bill is taken into account it is even more expensive. For the corner stays substantial iron posts or masonry structures are essential.

A tree known as the Horse Radish tree or in the vernacular as Saihan (botanically Moringa pterygosperma) is capable of reproduction by stem cuttings anything up to 8 or 10 inches in diameter, and of any length. Stout straight stems are obtained and "planted" two feet deep into the ground along the course of the boundary of the run. The netting is then fixed to these posts by staples. Eighty per cent. of these posts will take root and will remain as permanent fixtures.

The tree is fairly common in Northern India, but it may not be possible to obtain all the posts required, in one season. In this case as many as are procurable may be obtained and planted at distant intervals, temporary bamboo posts being used as intermediaries. Those that strike root will produce strong branches in a couple of years time, these are cut off and used to replace the bamboo posts as they decay. The best time to "plant" these posts is during the monsoon. The bottom end should be cut straight across with a saw; and make sure that this end rests *on* the bottom of the hole before filling in the earth.

A tree which affords similar facilities is to be found in Bihar and Orissa. This is largely used by villagers as supports for the pully for drawing water from wells. In every village two of these trees will be seen growing one on each side of the wells.

Conclusion.

Free your house of Ticks. Give plenty of Open runs to your birds. Give constant change both in food and environment. Breed from trap-nested stock. Avoid in breeding and I am convinced that there will be no deterioration in the birds bred in this Country—on the contrary there would rather be an improvement. Why should there not be when this is the original home of the fowl, and where we still have the strongest breed in the world?

THE END.

BLACKHEAD IN TURKEYS

By

J. F. CRAIG, M.A., M.R.C.V.S., *Principal.*

Veterinary College of Ireland, Dublin.

In this as in other countries blackhead has been found to be widely distributed and to be responsible for serious losses among turkeys. It appears to be the most common and the most serious contagious affection in these birds, and in certain farms it has rendered turkey raising unprofitable if not impossible by the old methods.

The incidence of mortality is greatest in the summer and autumn when the young turkeys are being raised, but deaths occur among the adult turkeys in the winter and spring. Sometimes flocks of young turkeys are wiped out by the disease, while the mortality among adult turkeys is much less, may be about 10 per cent. The ages at which the young turkeys are most commonly lost vary from about three weeks to three months.

Chickens are also affected with blackhead, but the mortality among them is not nearly so high as in the case of young turkeys, one of the prominent features noted being that the birds do not thrive. We have observed outbreaks of blackhead in chickens in which all the appearances corresponded with the changes in the turkey, but liver lesions were not so common.

It is usually accepted that turkeys are more subject to the disease when they are kept in association with common fowls and the view is often taken that the fowls act as carriers. In one outbreak we have been informed that the losses were occurring only among a batch of turkeys kept in the farmyard with the fowls, while another flock which was allowed to remain out in the fields by themselves continued to thrive and remained healthy.

Symptoms.

The disease is generally more acute in the younger turkeys. Sometimes all that may be noted is that their wings droop and death takes place within a few hours; and the losses may occur at a rapid rate. In the less acute cases the poults lag behind the flock, the wings droop, the affected birds cease to feed and may become almost too weak to stand. Only occasionally do the unfeathered parts of the head take on a dark blue colour, from which the name "blackhead" is derived. In some cases only is a yellow foetid diarrhœa noted. Loss of condition follows and the birds die after some days of illness.

In the adults the disease is milder and more chronic. All that may be noted is loss of condition and some diarrhœa. Sometimes they recover, but recovered birds may remain "carriers." Recovery from the disease, it may be remarked, does not appear to confer any substantial degree of immunity.

(Continued on Page No. 207.)

AN APPEAL.

Dear Readers!

Your club needs overhauling very badly and your humble Secretary has the following to place before you for your urgent and favourable consideration. If you are a true member of the Club and therefore a sincere friend of the Poultry Industry in India you must not fail to do your bit and give as much as you can.

Your Secretary is determined to make your Club an institution worth its name—THE ALL INDIA POULTRY CLUB—The object of which is to develop the poultry industry in India and he simply must get your support financially to achieve his object. Some may say it's a dream, a castle in the air as your Secretary is too busy to give his full personal attention to all this, but will be disillusioned when they see it accomplished. It is now up to you to disillusion them by giving the Club what it requires. If you fail it will be a serious set-back to the Club and therefore to the Poultry Industry from which it will be difficult to emerge, and the Club will remain, he apprehends, for ever an unknown institution that does nothing except holding poultry shows and publishing a journal, call it whatever you may. What use then ! Absolutely none. Your humble Secretary, therefore, appeals to you to place at his disposal the funds he needs. Every sum received will be gratefully acknowledged in the Gazette, and Committee Members will be kept informed of every expenditure. They will be requested to circulate it amongst all the members in their respective provinces for which a list of members in each province will be supplied to them. You will wonder why this great ambition ? Because your Secretary has been encouraged to take it up on account of the growing interest in poultry keeping in India, his zeal to develop a Poultry Industry in India, and the never-failing co-operation of Members and Subscribers since he took it over.

It may interest you to hear that he had been making constant endeavours to improve conditions in India in regard to the poultry industry, long before he had the honour of serving you as Honorary Secretary and Editor, through the public press. He twice pointed out the necessity for including poultry diseases as a compulsory subject in the curricula of veterinary colleges in India by means of articles in the Pioneer and other daily newspapers; he appealed to the Government, by means of an article in the Pioneer, to establish a Research Laboratory for investigations on poultry diseases and a Central Poultry Institute for carrying on other experiments in poultry breeding ; he, immediately on taking over, issued a letter to all the well-known newspapers in India that this Club stands for the promotion and development of poultry industry and is the only All-India Institution for the purpose, which publishes the only monthly poultry journal in India in a common language, which is the medium of carrying poultry news to interested quarters ; he submitted an application, on taking over, to the Imperial Council of Agricultural Research for financial assistance to conduct experiments, etc., connected with Poultry Husbandry and the reply is very favourable, but they wish to see your club doing something first. It may not be out of place to mention here that the interest now taken by the Imperial Council of Agricultural Research is far greater than what it ever took before your humble Secretary commenced bringing to its notice the great need for active interest in this industry which is the most suitable occupation for the agriculturist in India ; he placed before the country his views regarding improvement in marketing poultry and eggs in India and overcoming other difficulties in connection with the poultry industry by means of the article "Profit From Your Poultry" in the Pioneer ; he appealed to the Indian Railways to reduce freight on live poultry, improve transport conditions, etc., and allow concessions to travel both ways in single journey fare to an attendant with exhibits for the Club Shows, and is submitting an application for the purpose. The above articles appeared in the issues of the Pioneer and some other daily newspapers dated 9th August, 1930, 31st August 1930, 2nd October, 1931, 12th August, 1932, 19th August, 1932, in the Statesman, (Delhi Edition) and 3rd September, 1932.

The question arises what has been the result of all this. The result is as follows :—

(1) Increase in the number of members and subscribers.

(2) Enrolment of institutions like the Imperial Institute of Veterinary Research, Muktesar-Kumaun as Gazette subscribers.

(3) Promises of help to the Club, some of which have already been fulfilled, by the International Institute of Agriculture, Rome ; the World's Poultry Science Association ; Holland ; the Empire marketing Board, London ; the National Utility Poultry Society, England ; the United States Department of Agriculture, Washington, U. S. A. ; the Imperial Council of Agricultural Research, India ; the Imperial Institute of Veterinary Research, India ; the Department of Commercial Intelligence and Statistics, Government of India ; Indian Railways ; Indian States ; the Director, Civil Veterinary Department, U. P. ; Provincial Government Departments of Agriculture ; the U. P. P. A. ; Members ; and private individuals.

(4) The curricula of Veterinary Colleges in India are being revised by an expert Committee and the Club has been assured that due regard will be paid to your Secretary's proposals.

(5) An All-India Act for the control of infectious diseases in domestic animals, including poultry, is now in draft.

(6) The Gazette is gaining popularity.

(7) H. E. The Viceroy has honoured the Club by consenting to preside at the price distribution of the coming All-India-Poultry Show.

A sum of Rs. 10,000 is, therefore, required to make a beginning of the undermentioned. This shall be called the "Development Fund".

(1) A Pedigree Stock Farm.

(2) A Commercial Farm dealing in table poultry and eggs to determine the extent to which it can be profitable. This should include the organisation of efficient marketing of poultry and poultry products to enable the producer in the country to sell his commodity at a profitable rate.

(3) A Section for Research Work to conduct breeding experiments to evolve breed or breeds of poultry suitable and economically valuable for this country, and to test if pure-breds can live and lay as well if kept in the villages under conditions characteristic of the places as they would if kept on modern lines, as well as for any other purpose that the Club may, in future, consider useful for the poultry industry in this country.

(4) To hold a Conference annually, in connection with the All-India Poultry Show, of workers in Poultry Husbandry in India, Burmah, and if possible in Ceylon to review the work done in the past and to consider, discuss and decide the future programme of the work. It has been decided to hold this Conference in connection with the coming All-India at Delhi in January, 1933, and readers and others will be doing a personal favour to the Honorary Secretary by sending exibits, attending personally, and preparing papers on the different aspects of Poultry Industry.

(5) To compile a book annually called "The Review of Poultry Breeding Operations in India" and to arrange for the dissemination of knowledge contained in it as widely as possible in the country by means of leaflets, lectures, demonstrations and other suitable methods.

(6) To study conditions, by means of a tour round the country, regarding the Poultry Industry prevailing in the different parts of India, deliver lectures on poultry farming, attend provincial shows, and specially to discuss these schemes and collect funds for them.

(7) To form an Indian National Committee to organise India's representation at the Fith World's Poultry Congress to be held in September, 1933 at Rome, Italy.

In addition to these it is essential to keep a suitable office and equipment; the purchase of a Typewriter is unavoidable as the present one is very old, and constant repairs are very expensive.

The Secretary is fully aware of the difficulties these schemes involve in India, specially during these days of scarcity and depression everywhere in the country, but a sincere effort, he still holds, coupled with full co-operation of the Governments, Central and Provincial, Indian States, members, subscribers, and other private agencies, is sure to bring due return for the labour.

Readers are requested to send in their contributions on receipt of this Gazette for the Show Funds also. It would be better to give both these funds one name—DEVELOPMENT FUND.

Very little has been received so far.

NURUL ISLAM,

Hony. Secretary,

Indian Poultry Club,

2, Peel Road, Cantonments,

Lucknow, U.P

"EGGS FOR HATCHING"

Pure White Leghorn, Rs. **12/-** per doz. Cross-bred Black Orpington, Rs. **6/-** per doz. Sikim and Hill Fowl Eggs, Fowls of all sizes, ducks, geese and turkeys are always supplied at moderate rates by—

THE

NORTH BENGAL POULTRY FARM

LIMITED.

KURSEONG, D. H. Rly.

4

"RAINBOWS" FARM

Reliable Sittings from sound Adult Stock

IMPORTED UTILITY PEDIGREE BIRDS
BLOOD TESTED & INOCULATED

WHITE LEGHORNS ... R. I. REDS ... LIGHT SUSSEX ...	Rs. **20/-**	From TENNYSON FAWKES Large Egg Strains Arriving early November

WHITE LEGHORNS, R. I. REDS and
AUSTRALORPS ... Rs. **12/-**

FIRST CROSSES.

R. I. RED X L. SUSSEX *(Sex Link)* ... Rs. **12/**
LEGHORN X R. I. RED and
LEGHORN X AUSTRALORP ... ,, **10/-**

Sittings comprise 15 eggs
No replacements
Packing and Freight inclusive

Mrs. D. TURNER,
"RAINBOWS",
BASDEOPUR P. O.,
MONGHYR, E. I. RLY.

IF YOU ARE INTERESTED IN
AGRICULTURE, LIVE-STOCK, CO-OPERATION, ETC.
READ THE

MADRAS AGRICULTURAL JOURNAL

(INDIA'S PREMIER AGRICULTURAL MONTHLY)

Annual Subscription, including postage, Inland ... Rs. 4 0 0
" " " Foreign ... " 4 8 0
Specimen Copy on request.

Apply to :—**The Manager, Madras Agricultural Journal,**
Lawley Road P. O., COIMBATORE.
MADRAS PRESIDENCY.

EXC.

TENNYSON FAWKES,

ROYAL STOCK FARM,

LEONARD STANLEY,
GLOUCESTERSHIRE,
ENGLAND.

Patronized by Royalty, including Indian Princes and Home, Colonial and Foreign Governments, Established over 30 years. One of the most successful Breeders, Exhibitors, and Exporters of Exhibition and Utility Poultry. Winner of over 8,800 prizes and have supplied winners at all important shows in the World. Poultry and Pigeons of *all varieties exported entirely* at my own risk to India or any other part *of the World. Prices strictly reasonable* and inclusive. prompt and personal attention given to all orders and complete satisfaction guaranteed.

Correspondence in any language.

Illustrated catalogue mailed free.

12

SOUTH INDIAN POULTRY ASSOCIATION.

Yearly subscription Rs. 3. Two poultry shows per annum. Strong working Committee. Expert advice given, post mortem examinations undertaken at nominal *charge, members only. Further* particulars from Hony. Secy., S.I.P.A., *Aravankadu, Nilgiris.*

Exc.

ROBERT'S STAR PILLS.

Nos. 1 and 2.

No. 1 Cures Cholera and green Diarrhoea.

No. 2 Cures Tick Fever and contains directions how to get rid of ticks.

Full instructions with each box. 48 Pills in a box, Re. 1. When ordering write name and address distinctly.

Pills for Turkey chicks during their infancy to pull them through their *infant ailments.*

Apply A. G. Roberts,
3-B, Museum Road, Bangalore.

2.

The recognition of the complaint, like many other contagious diseases of birds, depends upon certain changes of the internal organs which can only be seen by post mortem examination of one of the dead birds. The symptoms alone are not sufficient for the purpose. On such an examination it will be found that the most important changes are confined to the caecal tubes and liver. In the very acute cases in young turkey chicks the caecal tubes, either one or both, are effected. They present chiefly a distention of the tubes with yellow semifluid contents and reddening of the mucous membrane or inner lining.

In the less acute cases, more extensive changes may be observed in these tubes. Not only are they distended, but their walls are thickened, the outer surface is rough, yellow or even black and the lining mucous membrane is reddened or even ulcerated and covered in part with yellow fibrinous deposit. In some cases there are plugs of this fibrin and cellular matter filling up some portion of the tube. The liver is also involved in many of the affected older turkeys. The lesions there consist of grey to yellow white, necrotic, firm areas, round in outline, sometimes showing concentric rings, dimpled on the surface, and varying in number and in size up to a threepenny or sixpenny piece or even larger. If a microscopic examination is made of the material from the lesions both in the caecal tubes and liver, the organisms responsible for the disease may be identified. In this way it is possible to distinguish this disease from a number of other affections, *e.g.*, from tuberculosis or tumours involving the liver. Sometimes severe losses are experienced among young turkey chicks under two weeks old in which only slight inflammatory changes may be recognised in the intestines, but in these cases there is no definite evidence of any relationship to the causal organism of blackhead.

Etiology.

With regard to the cause of this disease, it is now generally accepted that blackhead is caused by a small protozoan organism, discovered by Smith in 1895 and now termed *Histomonas meleagris*. This organism was at one time regarded as a stage in the development of coccidia, but that view largely arose from the fact that blackhead is sometimes complicated with coccidiosis. The *Histomonas*, unlike coccidia, does not invade epithelial cells. It is readily found in the caecal contents, it migrates into the bowel walls and may be carried in the blood stream to the liver where it is responsible for the necrosis of the liver cells.

That this organism is the cause of blackhead has been shown by the transmission of a fatal attack of the disease by subcutaneous inoculation of liver lesions. Ordinary chickens are only slightly susceptible to infection in this way.

When we consider natural infection on the other hand, we take it that the material responsible for transmission is in the droppings of the affected birds, whether it be a turkey or chicken showing symptoms, or a "carrier." According to the experiments of Smith, it would seem that some other factor or factors than the *Histomonas* in the droppings is required for successful natural transmission. Young affected turkeys may not carry the disease to in-contact healthy turkeys, whereas adult turkeys are a frequent source of infection. A factor which has been found to bring about transmission comprises the embryonated eggs of the common caecal worm of fowls and turkeys, *viz.*, *Heterakis papillosa* and it is believed that the larvae of this worm, when they hatch out in the intestine, break down the resistance of the tissues in the caecal wall and so facilitate the entrance of the *Histomonas*. According to Tyzzer and Fabyan, it was found possible to produce blackhead by feeding ripe *Heterakis* eggs which had been exposed to 1.5 per cent. nitric acid sufficiently long to render the material bacteriologically sterile. It is therefore suggested that the *Histomonas* may have actually penetrated the eggs and for that reason survived the exposure to the acid. However that may be, it must be acknowledged that the caecal worm has an important bearing upon the production of blackhead.

ACKNOWLEDGEMENT.

WE acknowledge, with thanks, the following donations to the Development Fund :—

His Excellency the Governor of Bengal Rs. 50.

H. H. The Maharaja Dhiraj of Patiala Rs. 51.

Captain W. Sherrard-Smith—Rs. 10.

At the same time there is no close relationship between the number of worms present in the birds and the incidence of this disease. The worms may be numerous in unaffected birds and some affected turkeys may harbour no *Heterakis*. It is possible that some other factor may also be responsible for facilitating infection in some instances, but if there is, it has yet to be found. As the development of the embryos in the warm eggs is only likely to take place in warm weather, the greater liability to contraction of the disease in the summer time becomes apparent. The presence of these eggs is an additional factor which must be considered in the transmission of blackhead in "old yards," in "hen runs" and by contact with adult turkeys. A damp condition of the soil is also favourable to infection.

IMPORTED LIGHT SUSSEX.

From Laying Trial Winners, England.

Gold medal strains.

Sittings Rs. 20/- per dozen.

Cockrel and pairs for sale.

White Leghorns—(Record Layer).

Sittings can be booked (from Nov. 1st onwards) when New Importation arrive. Rs. 20/- per dozen.

White Orpingtons. Sittings available only from December onwards. Rs. 15/- per dozen.

Apply :—

M. Ward,

Sole Importer of

Pedigree Sussex in ASSAM.

"THE HOME POULTRY FARM."

BREEDERS HIGHEST QUALITY :—

Imported **White Leghorns**

Black Australorps Eggs - Rs. **8/-** Per sitting of 15. Despatch Free.

Chicks - Rs. **14/-** Per dozen. Orders for and above Rs. **21/-**. Despatch Free.

Enquiries a pleasure. Let us know your wants we are sure to satisfy.

"Satisfaction Guaranteed" or Money Refunded.

Apply to—

J. E. FITZGERALD,

P. O. GIRIDIH.

Dist. HAZARIBAGH.

Moorla Utility Poultries.

Specialists in Guinea Fowl production for table and eggs for hatching.

Specially selected trios ... Rs. **8/-** per trio.

" " pairs ... " **6** - " pair.

Freight to nearest Rly. Station extra.

Read what the HON. SECRETARY of the I. P. CLUB says of our stock.

"Many thanks for the trio of Guinea Fowl which arrived safely and are good value for money."

Mrs. L. L. HARMAN,

4 **Ramgarhwa, B. & N. W. Rly.**

THE SURE REMEDY

POULTRY CUREALL PILLS.

(Registered.)

Highly commended by Buff Rock of the Gazette. Birds suffering from diseases such as the dreaded Ranikhet, cholera, etc., are with these pills Miraculously cured.

Price Rs. **2/-** per packet of 100.

The roughly reliable Asils and eggs available.

Price Rs. **55/-** per pair and eggs **15/-** per doz.

The Ideal Aseel House,

P. O. CHHUCHAKWAS,

2 Dist. ROHTAK.

MISSION POULTRY FARM,

KATPADI, S. INDIA,

Largest Poultry Farm in S. India. Yearly importers and breeders of W. Leghorns, R. I. Reds, Black Minorcas, Barred Plymouth Rocks and Light Sussex.

Eggs, day old chicks, and breeding stock for sale at reasonable prices.

Catalog on request.

Several used incubators for sale.

J. J. De VALOIS,

7 ***Manager.***

VISVA-BHARATI.

Institute of Rural Reconstruction.

POULTRY FARM.

THE BEST IN BENGAL.

Trains apprentices in scientific Poultry keeping. Awards from the 1927 World's Poultry Congress, Ottawa, Canada, and several Prizes at the All India Poultry Shows

Specialities :—

W. Leghorns and Chittagongs.

For particulars apply to :—

Director, Sriniketan, P. O. Surul.

9 **BOLPUR**

A few spare cockerels.

WHITE LEGHORNS

from large egg hens, sired by a cock of Tom Barron's famous strain.

AUSTRALORPS

Handsome ones of Lady Burke's strain. Rs. **7-8-0** and Rs. **10-0-0** according to age.

K. D. GARRISON,

12 ***Akola, Berar, C. P.***

INDIA' BEST IMPORTED

Leghorns.

The finest stock available in England and only landed this month.

Cockerel's dam and sire's dam laid 525/528 in 24 months.

This bird heads a pen of 10 hens with records of 270/288 in 12 months.

Eggs Rs. **18/-** per doz. inclusive all charges.

February onward young stock will be available and booked in strict rotation.

Mrs. R. POWELL,

12 **Kanchrapara, E. B. Rly.**

A. C. BULLMORE.

"ARTHURSTON" Poultry Farm

3, Central Road, Banglore.

Breeder of Highest Pedigree Profiic Laying Exhibition & Utility Poultry.

White Leghorns :—Barrons, Padmans Holywood, & Tancred 300 Egg Strain.

Rhode Island Reds :—Golden & American Utility, English & American Exhibition Strains

Eggs :—*From General Pens* Rs. **6/-** dozen Special Pens Rs. **12/-**, Extra Specia Rs. **20/-**, Super Special Rs. **25/-** dozen.

Infertiles (if any) replaced free.

11

GEORGE HOWARD,

SPERRIN POULTRY FARM,

Langley, HITCHIN, Herts, England.

Breeder, exhibitor, Exporter of pedigree utility and exhibition poultry. Exports at our own risks and inclusive prices for live delivery Indian ports. Prices from £ 2 per bird.

Absolute satisfaction guaranteed. See further Breeder's Cards. See also larger displayed advertisement in Gazette once each year. 2

UNIQUE EXPORT GUARANTEE.

As your late Secretary and Editor and exporter since leaving India our reputation for square dealing is well known. But in future will export utility poultry on approval *i.e.*, if not approved on arrival, send to Calcutta, Rangoon or all India Show for auction and if purchase price not realised we will refund difference. George Howard. 2

A £ 5 PRIZE.

Maintain the Stamina and quality of "Sperrin" strains by keeping them pure. We offer each year a cockeral value £ 5 as special for best bird at All India show bred in India from our strains, with no outcrossing. If you cannot import, then enquire conditions and purchase eggs from those who have our imported stock. Geo. Howard. 2

Preventive Measures.

Various chemical compounds have been tried in the treatment and prevention of this disease, but it cannot be claimed that any agent has had very definite specific effects on the parasite. When the disease has broken out in a flock, a great deal can be done to reduce the mortality.

Remedial measures include the destruction by fire of all dead birds and their droppings, the thorough cleansing and disinfection of the utensils daily, the frequent disinfection of the house, and where this can be done, *e.g.*, in enclosures, the application of quicklime to the run. The food should be given in troughs so as to limit the spread of the infection in the droppings. Such agents as catechu, ipecacuanha and potassium permanganate have appeared to be of service in many of the outbreaks in which they have been used in conjunction with the other measures of control.

THREE PRACTICAL URDU BOOKS ON POULTRY.

1. Poultry Farmers Guide with many coloured plates.

2. Treatise on Turkeys, Guinea Fowls, Pigeons, Ducks, Geese, Peacocks, and Rabbits.

3. Poultry Doctor.

These books are most up to date and have been highly spoken of by reputed poultry experts.

Price Rs. 1/4/- each, set Rs. 3/- inclusive of Postage.

PUNJAB POULTRY FARM,

SARGODHA, (Punjab).

3

Adult turkeys should not be allowed to run with the young turkey chicks or poults, nor should the turkeys be kept in the ordinary hen runs. The ground on which the turkeys are raised should be well drained and kept dry.

To avoid blackhead in future hatchings, the safest preventive method consists in hatching the turkey eggs in an incubator and raising the chicks in enclosures and brooders in a clean field away from other birds. Their position may be changed every week. Where this cannot be done, and the turkey chicks are kept with turkey hens, then the young turkeys should be raised on clean, dry, well-drained ground or pasture and changed frequently. Much may be done to control *Heterakis* infection by giving courses of anthelmintic or worm medicine. Tobacco in the proportion of 2 per cent. in the food has been recommended for this purpose, but it can only be claimed to reduce the extent of infection with the worms, and is not nearly 100 per cent. effective. Experimentally, removal of the caecal tubes of turkeys by operation might have a preventive action on account of the fact that these tubes are the point of entrance of the *Histomonas* and the habitat of the caecal worms. On a small scale, it appears to have had the desired effect, but it is not a method of prevention that is likely to become universally popular.

ANECDOTE SENT BY Mrs. FAWKES.

A short while ago there was a sensation in the English Poultry Circles as a hen at a Farm in Essex laid an egg with all the marlings of a watch on the outside of the egg shell.

It was a most curious affair and no one can understand how it happened.

If it had happened in India we should have said the bird had ticks !!!

Shouldn't we?

EGG LAYING TEST.

An egg laying test was introduced on the Government Central Poultry Farm, Kirkee, from November 1931. The test consists of placing two birds of different breeds, laying one a tinted egg and the other a white egg. The birds are housed in a small pen entirely enclosed, with a cement concrete house having an upper and lower compartment closed on 3 sides. The birds are open to all weather conditions. During the test only one bird died of natural causes. The statement attached shows some very interesting results.

No definite conclusions can be drawn at this stage as the Rhode Island Reds and White Wyandottes are only recent importations. The White Leghorns and White Wyandottes have gone through a far more severe moult than the Rhode Island Reds.

It is very satisfactory to note that a number of white Leghorns show from their monthly percentages that they can be classified at 230-egg-per-annum birds.

The test was started late, (*i.e.*) November, all the birds had been in lay for 2 or more months prior to going into the testing pens. The reason for this is that the houses were not ready.

This year, we start in October; and next year I hope on the 1st September; this then will give us a complete season's tests.

E. J. BRUEN,

Live Stock Expert to Government,

B. P. Poona.

APPENDIX

No. of Hen	Breed.	November 1931. Grade. I	II	Total.	December 1931. Grade. I	II	Total.	January 1932. Grade. I	II	Total.	February 1932. Grade. I	II	Total.	March. 1932. Grade. I	II	Total.	April. 1932. Grade. I	II	Total.	May. 1932. Grade. I	II	Total.
1	W. L. ...	6	1	7	7	1	8	15	...	15	16	2	18	17	3	20	13	5	18	8	10	18
2	Wydt. ...	...	4	4	21	5	26	20	5	25	12	11	23	10	11	21	4	15	19	...	15	15
3	W. L. ...	9	3	12	16	4	20	14	8	22	8	11	19	8	14	22	7	13	20	2	19	21
4	R. I. R. ...	9	2	11	20	...	20	22	...	22	21	...	21	20	...	20	15	...	15	11	...	11
5	W. L. ...	8	3	11	7	1	8	14	...	14	17	...	17	16	...	16	14	4	18	15	1	16
6	Wydt. ...	...	8	8	...	17	17	...	3	3	2	2	4	1	...	1	...	...	...	...	...	...
7	W. L. ...	8	3	11	12	...	12	8	...	8	13	...	13	9	...	9	10	...	10	7	...	7
8	R. I. R. ...	3	5	8	21	...	21	23	...	23	20	...	20	14	...	14	14	...	14	14	...	14
9	W. L. ...	5	6	11	25	...	25	11	11	22	9	11	20	19	1	20	12	10	22	17	4	21
10	Wydt. ...	...	9	9	9	14	23	8	5	13	13	2	15	11	...	11	9	...	9	18	...	18
11	W. L. ...	9	2	11	22	1	23	15	6	21	9	11	20	11	3	14	9	4	13	7	7	14
12	R. I. R. ...	4	8	12	...	23	23	...	24	24	...	22	22	...	11	11	...	13	13	...	17	17
13	W. L. ...	...	...	...	3	...	3	21	1	21	18	1	19	17	...	17	20	...	20	18	...	18
14	Wydt. ...	...	...	...	17	3	20	9	...	9	8	2	10	14	4	18	1	7	8	14	3	17
15	W. L. ...	...	...	...	15	...	15	20	...	20	25	...	25	23	...	23	16	1	17	10	9	19
16	R. I. R. ...	...	...	...	5	4	9	5	2	7	15	2	17	18	...	18	7	...	7	7	2	9
17	W. L. ...	...	...	...	13	...	13	15	...	15	14	...	14	16	...	16	15	...	15	18	...	18
18	R. I. R. ...	...	...	...	16	4	20	15	6	21	9	11	20	19	1	20	10	1	11	8	...	8
19	W. L. ...	...	...	...	...	...	...	14	1	15	14	1	15	17	1	17	14	...	14	19	1	20
20	Austral ...	...	...	...		...	...	15	2	17	11	5	16	8	...	8	11	1	12	11	...	11
21	W. L. ...	...	...	...	...	...	...	15	...	15	20	...	20	21	...	21	21	1	22	20	1	21
22	R. I. R. ...	...	...	...	...	...	...	...	16	16	...	15	15	2	12	14	...	13	13	...	9	9
24	W. L. ...	...	...	...	...	...	...	12	...	12	21	...	21	20	...	20	17	...	17	19	...	19
25	Austral. ...	...	...	...	...	...	...	13	...	13	12	...	12	10	...	10	7	...	7	8	...	8
	Total ...	61	54		229	77		303	90		307	109		321	60		246	88		251	98	

Reference:—W. L. ... White leghorn breed of fowl.
R. I. R. ... *Rhode Island Red* ,, ,, ,,
Wydt. ... Wyandotte ,, ,, ,,
Austral ... Australorp ,, ,, ,,

—XVII.

June 1932. Grade I	June 1932. Grade II	June 1932. Total.	July 1932. Grade I	July 1932. Grade II	July 1932. Total.	August 1932. Grade I	August 1932. Grade II	August 1932. Total.	September 1932. Grade I	September 1932. Grade II	September 1932. Total.	Total. 1st Grade eggs.	Total. 2nd Grade eggs.	Total.	Monthly average yield during the period.	REMARKS
17	1	18	15	...	15	4	...	4	...	...	...	118	23	141	14·1	
...	18	18	...	9	9	...	6	6	...	5	5	67	104	171	15·5	
15	8	23	16	6	22	17	3	20	11	...	11	123	89	212	19·3	
9	...	9	7	...	7	7	...	7	5	...	5	146	2	148	13·5	
15	...	15	5	...	5	1	...	1	...	...	...	112	9	121	12·1	
...	...	...	...	...	...	...	...	...	...	...	...	3	30	33	6·4	Died.
5	...	5	...	...	...	...	...	...	...	...	...	72	3	75	9·4	
19	...	19	17	...	17	11	...	11	11	...	11	167	5	172	15·5	
13	4	17	21	...	21	23	...	23	11	...	11	166	47	213	19·4	
10	1	11	12	...	12	21	...	21	8	...	8	119	31	150	13·6	
10	4	14	15	3	18	8	1	9	...	...	...	115	42	157	15·7	
...	18	18	...	17	17	...	6	6	...	...	...	4	159	163	16·3	
14	...	14	2	...	2	4	...	4	1	...	1	117	2	119	11·9	
												02	20	122	12·2	
15	...	15	14	1	15	6	...	6	4	...	4	175	11	186	18·6	
21	...	21	20	1	21	16	...	16	9	...	9	86	11	97	10·8	
13	...	13	13	1	14	3	...	3	...	...	...	148	...	148	14·0	
17	...	17	15	...	15	16	...	16	9	...	9	123	23	146	14·6	
12	...	12	12	...	12	13	...	13	9	...	9	108	4	112	14·0	
16	...	16	13	1	14	1	...	1	...	...	...	102	9	111	12·3	
13	...	13	12	1	13	18	...	18	3	...	3	169	3	172	19·1	
19	...	19	21	1	22	21	...	21	11	...	11	4	89	93	11·6	
...	10	10	2	8	10	...	6	6	...	...	...	162	...	162	18·0	
16	...	16	23	...	23	23	...	23	11	...	11	75	...	75	9·3	
13	...	13	5	...	5	7	...	7	...	...	...					
282	64		260	49		220	22		103	5						

Eggs are graded as under :—

1st Grade :— $1\frac{7}{8}$ to 2 ozs. and over

2nd ,, $1\frac{1}{2}$ to $1\frac{3}{4}$,,

3rd ,, Under $1\frac{1}{2}$,,

In the above statement, birds have not laid any 3rd Grade eggs.

YULDEN FARMS, LIMITED.

"WHYWAS" SANDY CROSS,

Heathfield, Sussex,

ENGLAND.

100% EXHIBITION UTILITY BREEDS.

WHITE LEGHORNS, - WHITE WYANDOTTES, - R. I. REDS, - SUSSEX.

In placing this notice before our Indian friends we wish to advise them we are now in a position to export Britain's Best at figures previously unheard of in the breeds we are stocking on our big Sussex farm.

Every layer and breeding pen on the farm is trapnested, and a bird that does not produce a 2 oz. egg after she has been in lay 30 days is never bred from.

This year we have many Trios going out to shows and to breeders. Quotations gladly given to prospective importers.

Farm Manager
A. O. FODEN,
Your late Editor and still at your service.

In India
W. E. J. YULE,
2, FANCY LANE, CALCUTTA.
Your late Club Secretary & Hon. Show Secretary.

12

CAN WE HELP YOU STILL.

THE

FIFTH WORLD'S POULTRY CONGRESS

Will be held at ROME, ITALY, from the 6th to the 15th September, 1933 under the direct Patronage of H. M. the King of Italy.

India Must Be Represented At This International Gathering.

Particulars can be had on application to—

The Honorary Secretary,

INDIAN POULTRY CLUB,

No. 2, Peel Road, Cantonments,

12 **LUCKNOW, U. P.**

Mr. Backyarder.

Do you know that the Male Bird is more than half your Breeding Pen ?

I can offer you

PEDIGREE TOM BARRON WHITE LEGHORN COCKERELS.

(The finest strain in the World)

With the high fecund factor.

Fine Birds Proud of their Ancestry and sure to increase both egg yield and egg size.

Further particulars from:—

BATEMAN'S POULTRY FARM,

KUMLAHI, SIMLA S.W. 12

? ? ?

Questions under this heading are answered free of charge on this page.

Letters should be addressed—BUFF ROCK,

C/o. The Hon. Editor, I. P. GAZETTE and marked "Query".

Where readers desire an individual reply they should enclose a stamped addressed envelope and a fee of As. -/8/- is charged.

Mr. M. B. from Fern Hill, Nilgiris asks if Transylvanian Naked neck fowls are of any value. These birds, he adds, are supposed to have originated in Eastern Hungary, and he has a good trio of these which are good layers.

INDIAN POULTRY CULTURE.

By The Ex-Secretary, I. P. G.

Captain A. O. FODEN,

In English and Bengali

Only a few copies left.

PLACE YOUR ORDER TO-DAY

To Avoid Disappointment

WITH

The Honorary Secretary,

2, PEEL ROAD,

CANTONMENTS.

LUCKNOW, U. P.

A.—This breed is a good utility breed and should do well in a climate as exists in this country.

Mr. G. M. B. from Fyzabad asks.—What breed (pure or cross) of ducks is most suitable for his place with a view to *early maturity* and *low vitality*. A pure breed, he says, if hardy, would be an advantage on account of the initial costs. He wishes to know if I can recommend the Buff Orpington. The soil there, he adds, is clayly, hard in summer, and retentive of moisture in the rains, the average rainfall upto the 20th September, 1933 was about 35", and the maximum temperature during the summer is about 115°.

A.—The most suitable breed for you Mr. G. M. B. is the Indian Runner.

ADVERTISE

IN THE

I. P. GAZETTE.

THE ONLY POULTRY

JOURNAL OF INDIA.

The Deputy Administrative Officer, Agricultural Section, Malwa, asks if the Club owns a poultry farm and if so, what breeds in their opinion would be suitable for commercial multiplication in Malwa tract (Central India Western plateau).

A.—I would recommend the White Leghorn, Rhode Island and pure Bussrah.

SMALL CLASSIFIED ADVERTISEMENTS.

Advertisements are accepted under these columns at annas four per line, minimum charge Re. 1, for each additional line annas four extra. No additional charge is made for a box number.

Sale.

FOR SALE. Eggs from pure Game birds (Asil) Rs. 12/- per doz. Orders in rotation.
2

POULTRY PILLS. The only remedy for Cholera, Roup, etc. Rs. 3/- per hundred. S. Armour, Lovedale, Nilgiris, 6.
2

FOR SALE. "A firm in Holland dealing in poultry food and seeds solicits enquiries for ant's eggs from new crop. Large stock at moderate prices C.I.F. Calcutta. Enquiries may be sent to Messrs. Corn van Beusekom, Arnhem, Holland.
1

"FOR SALE. *Tamlin 40 egg incubator in* excellent condition. Rs. 100/- F. Simmons, Kulladakurichi, P. O. Tinnevelly District."
2

Exchange.

TO EXCHANGE. One pair surplus superfine Asils for a really good pair of Partridge Wyandotte, Buff Rock, or Jersey Black Giants. Also one equally good pair Asils for a Bull Mastiff or Bull terrier dog. Reply Box No. 43 Indian Poultry Gazette Office, Cantonments, Lucknow.
2

Wanted.

Classified Advertisement.

Situations Vacant.

Holiday Resorts.

Advertiser is willing to take paying guests on her Poultry Farm near a popular hill-station in the Punjab. Quiet open air life.

Particulars from Box No. 45, I. P. G.